Monte Carlo Studies of Wetting and Interface Unbinding in the Ising Model (Invited)

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Computer simulations have played an important role in the elucidation of wetting and interface unbinding phenomena. In particular, use of the Ising-lattice-gas model in a film geometry and subject to diverse surface and bulk magnetic fields has permitted extensive Monte Carlo simulations to reveal new features of the phase diagrams associated with these phenomena and to provoke new theoretical studies. The status of our knowledge about the nature of wetting and interface-delocalization transitions which has resulted from these Ising model simulations will be summarized.